

CLAIMS AMENDMENTS

Claim 1 (currently amended) For a vertical cryogenic liquid turbine generator ~~or pump~~ having main product-lubricated bearings separated by a span of shaft and a thrust equalizing mechanism adjacent one of said main bearings, the lubricated bearings having bearing blocks, the thrust mechanism comprising a thrust plate, variable orifice and fluid chamber, the fluid chamber fluidically coupled to the variable orifice, an improvement comprising a stationary spacer composed of material that shrinks less than the shaft of the generator interposed between the thrust plate of the thrust equalizing mechanism and the bearing blocks of its adjacent main bearing to reduce the span between said main bearings ;~~wherein the spacer is composed of material that shrinks less than the shaft of the generator.~~

Claim 2 (canceled)

Claim 3 (currently amended) The improvement according to claim 1 wherein the height of the spacer is selected such that it is operative over the according to desired thrust equalizing mechanism operating parameters over temperature range of the cryogenic liquid turbine generator.

Claim 4 (canceled)

Claim 5 (currently amended) For a vertical cryogenic liquid turbine generator ~~or pump~~ having product-lubricated main bearings separated by a span of shaft and a thrust equalizing mechanism which includes a stationary thrust plate adjacent one of the main bearings and a variable orifice defined between the thrust plate and a throttle plate affixed to the shaft, an improvement comprising a stationary length compensator interposed between the thrust plate and its adjacent main bearing to space said adjacent main bearing from the thrust plate in order to reduce the span between said main bearings,

wherein the spacer is composed of material that shrinks less than the shaft of the generator.

Claim 6 (canceled)

Claim 7 (currently amended) The improvement according to claim 5 wherein the heights of the thrust plate and the length compensator are selected ~~such that they are operative over the to produce a desired variable orifice over a range~~ of operating temperatures of the cryogenic liquid turbine generator.

Claim 8 (canceled)

Claim 9 (currently amended) For a vertical cryogenic liquid turbine generator ~~or pump~~ having product-lubricated main bearings separated by a span of shaft and a thrust equalizing mechanism which includes a stationary thrust plate adjacent one of the main bearings, an improvement comprising stationary means interposed between the thrust plate and its adjacent main bearing to space said adjacent main bearing from the thrust plate in order to reduce the span between said main bearings, wherein the spacer is composed of material that shrinks less than the shaft of the generator.

Claim 10 (canceled)

Claim 11 (currently amended) The improvement according to claim 9 wherein the height of said means is selected according to desired thrust equalizing mechanism such that they are operative over the operating parameters over a temperature range of the cryogenic liquid turbine generator.

Claim 12 (canceled)

Claim 13 (new) For a vertical cryogenic liquid pump having main product-lubricated bearings separated by a span of shaft and a thrust equalizing mechanism adjacent one of said main bearings, an improvement comprising a stationary spacer interposed between the thrust equalizing mechanism and its adjacent main bearing to reduce the span between said main bearings, wherein the spacer is composed of material that shrinks less than the shaft of the pump.

Claim 14 (new) The improvement according to claim 13 wherein the height of the spacer is selected such that it is operative over the temperature range of the cryogenic liquid pump.

Claim 15 (new) For a vertical cryogenic liquid pump having product-lubricated main bearings separated by a span of shaft and a thrust equalizing mechanism which includes a stationary thrust plate adjacent one of the main bearings and a variable orifice defined between the thrust plate and a throttle plate affixed to the shaft, an improvement comprising a stationary length compensator interposed between the thrust plate and its adjacent main bearing to space said adjacent main bearing from the thrust plate in order to reduce the span between said main bearings, wherein the spacer is composed of material that shrinks less than the shaft of the pump.

Claim 16 (new) The improvement according to claim 15 wherein the heights of the thrust plate and the length compensator are selected such that they are operative over the range of operating temperatures of the cryogenic liquid pump.

Claim 17 (new) For a vertical cryogenic liquid pump having product-lubricated main bearings separated by a span of shaft and a thrust equalizing mechanism which includes a stationary thrust plate adjacent one of the main bearings, an improvement comprising stationary means interposed

between the thrust plate and its adjacent main bearing to space said adjacent main bearing from the thrust plate in order to reduce the span between said main bearings, wherein the spacer is composed of material that shrinks less than the shaft of the pump.

Claim 18 (new) The improvement according to claim 17 wherein the height of said means is selected according to desired thrust equalizing mechanism such that they are operative over the temperature range of the cryogenic liquid pump.

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